

ANNUAL REPORT FOR 2002



Manteo Bypass Bridge Mitigation Site
Dare County
Project No. 8.T051403
TIP No. R-2551 A



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December 2002

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SUMMARY

The following report summarizes the monitoring activities that have occurred in the past year at the Manteo Bypass Bridge Restoration Site. The purpose of the site is to restore a brackish marsh system that was impacted in relation to the Manteo Bypass Bridge construction (permit violation). The site was restored in August and September 1999. Monitoring activities for 2002 include the second year of vegetation monitoring for the site.

The mitigation encompasses approximately 0.128 acres total. The site consists of brackish marsh restoration. The restoration effort involves removing spoil deposited by the jetting of piles and monitoring the spoil removal area to ensure that natural regeneration of *Juncus roemerianus* (*blackneedle rush*). No hydrologic monitoring is required for this project; however, vegetation monitoring is required for five years.

Due to the lack of rapidly recovering/regenerating blackneedle rush, the Department planted the entire restoration area in May 2001 in an effort to “jump-start” the vegetation.

In 2002 the frequencies improved with the frequency of target species being 100% and the vegetative coverage having 3.9%. This is above the required frequency (70%) stated in the success criteria. A scale value of 5 for the vegetative coverage is required for year five.

1.0 INTRODUCTION: MANTEO BYPASS BRIDGE MITIGATION SITE

1.1 Project Description

The Manteo Bypass Bridge Restoration Site is located immediately adjacent to the western terminus of the new bridge over the Croatan Sound associated with the Manteo Bypass (TIP R-2551A), as is shown in figure 1. The site consists of approximately 0.128 acres and provides for the following types of mitigation:

Brackish Marsh Restoration

1.2 Purpose

The purpose of this report is to detail the vegetation monitoring in 2002 at the Manteo Bypass Bridge Restoration Site. No hydrologic monitoring is required for this particular site.

1.3 Project History

| | |
|--------------|--------------------------------|
| October 2000 | Vegetation Monitoring (1 YEAR) |
| May 2001 | Site Planted |
| August 2001 | Vegetation Monitoring (1YEAR) |
| July 2002 | Vegetation Monitoring (2 YEAR) |



Figure 1: Manteo Bypass Bridge Mitigation Site

2.0 VEGETATION: MANTEO BYPASS BRIDGE

2.1 Success Criteria

The vegetative marsh success of the wetland site will be determined in accordance with NMFS Guidelines. Monitoring plots found to be located within the open water channel will not be evaluated, and will not count toward the final count of plots. The vegetation component of the wetland site will be deemed successful if the following criteria are met:

1. At year five, the average of all plots should have a scale value of 5 (75% vegetative cover) consisting of wetland herbaceous species, not including any invasive species.
2. A minimum of 70% of the plots shall contain the target (planted) species.

2.2 Description of Species

The following marsh grass species was planted in the Wetland Restoration Area:

Juncus roemerianus, Black Needle Rush

2.3 Results of Vegetation Monitoring

| Plot # | Scale Factor | <i>Juncus roemerianus</i> | Frequency | Comments |
|-------------------------------------|--------------|---------------------------|-----------|--------------------|
| 1 | 4.0 | ✓ | ✓ | Cattail |
| 2 | 3.0 | ✓ | ✓ | |
| 3 | 5.0 | ✓ | ✓ | |
| 4 | | | | Open water |
| 5 | | | | Open water |
| 6 | 4.0 | ✓ | ✓ | |
| 7 | 5.0 | ✓ | ✓ | <i>Pluchea</i> sp. |
| 8 | 3.0 | ✓ | ✓ | |
| 9 | 5.0 | ✓ | ✓ | |
| 10 | 4.0 | ✓ | ✓ | |
| 11 | 2.0 | ✓ | ✓ | |
| 12 | 5.0 | ✓ | ✓ | |
| 13 | 2.0 | ✓ | ✓ | |
| 14 | 4.0 | ✓ | ✓ | |
| 15 | 5.0 | ✓ | ✓ | |
| Frequency (Percentage of Plots with | | 100% | 100% | |
| Desired Species) | | | | |
| Sum Scale Value | | | 51 | |
| Total Number of Plots | | | 13 | |
| Vegetative Cover (Scale Value) | | | 3.9 | |

2.4 Conclusions

Percent Frequency of Target Species (Black Needle Rush) **100%**
Frequency of 70% required.

Vegetative Cover Scale Value **3.9**

Scale Value of 5 required for year 5.

This marsh grass site is approximately 0.128 acres. The percent frequency meets the 70% requirement. The vegetative cover did not meet the requirement but is on track for the second year of planting.

NCDOT will continue vegetation monitoring at the Manteo Bypass Bridge Mitigation Site.

3.0 OVERALL CONCLUSIONS/RECOMENDATIONS

Based on the vegetation data provided in this report, the Department proposes to continue vegetation monitoring for this site.

APPENDIX A

SITE PHOTOS & PHOTO LOCATION MAP

Manteo Bypass Bridge



Photo 1



Photo 2



Photo 3

